

REMARKS

In the Office Action mailed May 6, 2008, the Examiner noted that claims 1, 14, 15, 17-19 and 32-36 and 38 were pending, claims 3-13, 16, 20-24 and 27-31 have been withdrawn from consideration, and the Examiner rejected claims 1, 14, 15, 17-19 and 32-36 and 38. Claim 38 has been canceled, and, thus, in view of the forgoing claims 1, 14, 15, 17-19, 32-36 remain pending for reconsideration which is requested. No new matter has been added. The Examiner's rejections are traversed below.

The Examiner maintains the rejection of claims 1, 14, 15, 17-19 and 32-36 over combinations of Fuss, Nakai and Katajamaki.

Claim 1 calls for "dividing an original image into a plurality of image sub-areas according to tone level information of pixels forming the image". The Examiner points to Fuss at col. 6, lines 57-67 for this feature. This text discusses dividing to allow local histograms to be produced but says nothing about dividing based on tone level and, in fact, this text supplies no criteria whatsoever for dividing the image into local areas. The Summary (see Fuss col. 3) discusses that the local histograms are of critical areas which are areas where a significant portion of the dynamic range of the image exists and areas where the image black point and white point occur, covering the entire dynamic range from black to white ("where the critical areas include both areas having represented therein a significant portion of the dynamic range of the image and the areas in which the black point of the image and the white point of the image occur" - Fuss, col. 3, lines 43-48). That is, Fuss teaches away from dividing based on tone level since dividing based on tone level would result in areas that do not represent a significant portion of the dynamic range.

The Examiner also points to Nakai at col. 5, lines 50-61 and col. 6, lines 46-58. This text discusses extracting a specific color:

It is an object of the present invention to provide a color correcting device for use in a full-color copying system with color masking, which is capable of determining areas of specific colors (e.g. flesh-color, sky-blue) determined during the time of pre-scanning an original image; selectively uses a plurality of correction matrices for correcting colors (flesh-color, sky-blue and normal colors) at the time of color masking, depending on whether the specific color area is larger than the specific value or not; dynamically switches the color correcting matrices according to pixels' colors; characterized by excellent color reproduction of the original that can be obtained and capable of high speed printing of the original having small amounts of the specific color.

The present invention proposes to prepare a plurality of specific color correcting

tables (for flesh-color, sky-blue and so on), each containing image data obtained from measurements of image samples of only a specific color (e.g. flesh-color or sky-blue); selectively extracting any desired area of any specific color on a full-color original image; and of performing color correction with color masking of the extracted area according to the designated color correction table and of not-extracted areas according to a table for normal color correction. This feature is effective to provide a full-color copy image of a desired color quality and to improve the image quality of a digital full-color copying machine.

Extracting based on a specific color (see Nakai Abstract) also teaches away from dividing based a significant portion of the dynamic range and, as a result, a person of ordinary skill in the art would not look to Nakai for improvements to Fuss and, therefore, would not combine Fuss and Nakai.

Katajamaki says nothing about the above-discussed feature.

Claim 1 also calls for "computing a characteristic amount for each of the plurality of sub-areas producing characteristic amounts; and computing a statistic amount for estimation of the tone color value level of a whole of the original image using the characteristic amounts for each of the plurality of sub-areas". That is, the statistic amount is computed based on the whole of the original image. As the Examiner notes the local histograms can be combined. However, it is the local histograms for the critical areas of the image where, as noted above, the critical areas are areas that represent a significant portion of the dynamic range of the image and areas in which the black point of the image and the white point of the image occur (the entire dynamic range). That is, the combination in Fuss is not of the areas of the whole image but only of the areas deemed critical areas.

In fact, Fuss teaches away from combining histograms for all areas of an image or for the whole image by seeking to improve a natural scene image (see Fuss col. 3, lines 44), doing so by using only a subset of the image (See Fuss Abstract and claim 1) and by identifying, within an image, pictorial and non pictorial image areas (see Fuss, col. 5, lines 28-33) and understanding that background areas are irrelevant (see Fuss, col. 7, lines 2-5). That is, Fuss teaches away from "computing a statistic amount for estimation of the tone color value level of a whole of the original image using the characteristic amounts for each of the plurality of sub-areas".

Nakai and Katajamaki say nothing about the above-discussed feature.

Claims 14, 15, 17, 19 and 32-36 also emphasizes similar features.

Serial No.: 09/957,032

Docket No.: 826.1751

It is submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: August 6, 2008

By: /J. Randall Beckers/
J. Randall Beckers
Registration No. 30,358

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501